



Commonwealth Edison  
Quad-Cities Nuclear Power Station  
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BBS-73-212

October 12, 1973

Mr. James G. Keppler  
Regional Director  
Directorate of Regulatory Operations - Region III  
U. S. Atomic Energy Commission  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

SUBJECT: Reinspection of Unit 1 Hydraulic Shock Suppressors at  
Quad-Cities Nuclear Power Station

Dear Mr. Keppler:

In accordance with Regulatory Operations Bulletin No. 73-4 a re-inspection was conducted recently on Unit 1 to determine the condition of Bergen-Patterson hydraulic shock absorbers installed in safety related systems. Seven of the twenty-nine shock absorbers inspected after about 46 days of operation were found in an unsatisfactory condition. All of the shock absorbers were inspected in-place following the September 22, 1973 shutdown and 24 were replaced with rebuilt units obtained from Bergen-Patterson. The remaining five were removed, rebuilt, and reinstalled. The defective shock absorbers were disassembled and thoroughly inspected during the week of October 1, 1973 following the outage.

All of the shock absorbers removed from Unit 1 have been rebuilt by station maintenance personnel. Molded polyurethane seals and ethylene propylene o-rings were utilized in the repair of these units which will be installed in Unit 2 during the forthcoming outage. Six of the shock absorbers received from Bergen-Patterson were also rebuilt in this manner prior to installation in Unit 1. This was necessary when minor oil leaks were discovered at the base of the accumulator piston. It should be emphasized that these were very small leaks and in our opinion would not have affected the proper operation of the shock absorbers.

#### DESCRIPTION OF FAILURES

SNUBBER ID. NO.	SIZE STROKE X BORE	SYSTEM	FLUID STATUS	REBUILT IN AUGUST 1973
1-2	6" x 2 1/2"	Recirc	Leak	Yes
1-5	6" x 5"	Recirc	Empty	No
1-11	6" x 5"	Recirc	Leak	No
1-13	6" x 5"	Recirc	Leak	No
1-14	6" x 2 1/2"	RHR	Leak	Yes
1-15	6" x 2 1/2"	RHR	Empty	Yes
1-25	6" x 4"	Recirc	Empty	Yes

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PDR ADOCK 05000254  
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*Handwritten signature and date: 10/25/73*

Mr. James G. Keppler

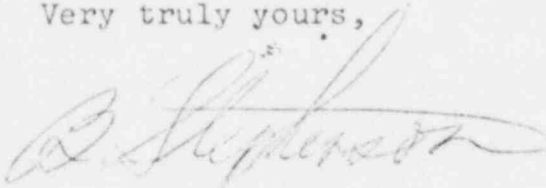
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All the failures tabulated above were the result of leaks from O-ring failures. In those snubbers which were not repaired in August 1973 the original O-rings were found in a gummy condition. Of the snubbers which were previously repaired, some of the O-rings appeared to have taken a set and showed varying degrees of hardness including those where there was no evidence of fluid leakage. Although a discoloration was observed in most of the cup seals, no indications of failures of these parts were detected. Some O-rings also appeared to have been pinched, however, not to the extent that would have resulted in leakage.

Just prior to the Unit 1 startup on September 29, 1973 all of the shock suppressors which were replaced during the outage were inspected again and no leaks were observed. A permanent program for the modification and periodic reinspection of hydraulic shock suppressors has not yet been established. This program will be developed following the reinspections to be performed on Quad-Cities Unit 2 and at Dresden Nuclear Power Station. To establish the basis for this program the results of laboratory testing currently being performed by Commonwealth Edison, General Electric, and Bergen-Patterson must also be evaluated.

Very truly yours,



B. B. Stephenson  
Station Superintendent

BBS/RAN/lk